INTERIM REPORT OF THE SELECT COMMITTEE ON MINING OF THE ONTARIO LEGISLATURE

MR. RENE BRUNELLE,
M.P.P.,
CHAIRMAN

MAY 1965

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PRINCIPAL MINING AREAS OF ONTARIO

KEY TO SYMBOLS

Ag — Silver	Fl — Fluorspar	Pt — Platinum
Asb — Asbestos	Gyp — Gypsum	Se — Selenium
Au — Gold	Ne — Nepheline syenite	Te — Tellurium
Co — Cobalt	Ni — Nickel	Th — Thorium
Cu — Copper	Pb — Lead	U — Uranium
Fe — Iron	Pd — Palladium	Zn — Zinc

Courtesy of Dept. of Mines

Acknowledgements

In acknowledging the splendid assistance and co-operation extended to the Select Committee on Mining by officials of mining companies, mills, plants, and municipalities, it must also be stated that they impressed the Committee with their sincere desire to make a direct contribution toward the improvement of Ontario's rapidly expanding mining industry.

To date a considerable number of briefs have been received from a cross-section of those who can be considered the voice of mining in Ontario: the Ontario Mining Association; mining municipalities; labour unions; individual mining companies; mining engineers and consultants; prospectors; and the investor. To these and many more the Committee is indebted for the many thought-provoking briefs submitted and for the many acts of kindness extended to us during inspection tours.

Select Committees are largely dependent on the assistance and co-operation they receive from companies, associations, government departments and agencies. This Committee is no exception, and the services of all the above have been provided willingly and freely on numerous occasions.

The services of various departments of government were heavily relied upon for information and technical assistance. A special word of gratitude is extended to the Minister of Mines, the Honourable George C. Wardrope, who has been most co-operative and helpful in making the services and facilities of his offices open to frequent requests for assistance. During inspection tours and public hearings the departmental geologists were most helpful in providing technical assistance to the Committee, for which we are most appreciative.

Interim Report

1. On the 8th of May, 1964, the Legislative Assembly of the Province of Ontario appointed a Select Committee on Mining:

".....to inquire into and report upon methods of stimulating prospecting and mining exploration and development in Ontario and, without limiting the generality of the foregoing, such matters as the services available to the mining industry, regulations governing the financing of mining prospecting and development, the effects of mining taxation on the growth of the industry, health measures in the mining industry, and any other related factors the study of which would bring about renewed interest and activity in that industry and thus strengthen the economic position of the northern communities and Ontario as a whole."

2. Thirteen members were nominated to the Committee, as follows:

Rene Brunelle, *Chairman*

Dalton Bales	A. Alexander Mackenzie
J. C. G. Demers	William G. Noden
R. Allan Eagleson	Clarke T. Rollins
E. G. Freeman	Elmer W. Sopha
Lorne C. Henderson	John P. Spence
R. Glen Hodgson	R. A. H. Taylor

Mr. George Mason was appointed Secretary to the Committee on the 8th of June, 1964.

3. Under the powers granted to it with respect to the convening of sessions, the receiving of briefs and presentations, and the examining of witnesses, and within the broad framework of its terms of reference as defined above, the Committee immediately commenced its work. In a public announcement of the establishment of the Commitee, civic heads, corporate bodies, associations, and private persons were invited to present submissions pertaining to the performance and functioning of the mining industry in the Province of Ontario. During the month of July, 1964, the members toured mining municipalities of northeastern Ontario from Timmins to the Sudbury Basin for the

purpose of gaining first-hand knowledge of the nature of mining operations, both on the surface and underground, the setting of the industry, and the problems and needs of the mining community as a whole.

4. The first public hearing was conducted on the 14th of October, 1964; between then and the 13th of January, 1965, numerous meetings were held in Toronto, Hastings County and in the north country, at which documents, statements and submissions, some comprehensive and formally presented, others shorter and of a more informal kind, were put forward for the Committee's consideration. The participants were questioned by the members of the Committee. Appendix "A" lists the dates and locations of these sittings. Appendix "B" carries particulars of the briefs received or promised from a wide range of interests: municipalities, municipal industrial commissions, mining companies and associations, broker-dealers, engineers, geologists and prospectors, trade unions, conservationists, community organizations, educationists and educational institutes, chambers of commerce, tourist groups, public utilities, government departments and agencies.

5. In the course of the Committee's deliberations a large number of problems bearing on the progress of the mining industry and on the welfare of the communities dependent upon it, have been brought to light. These are of a most varied nature. The following classification, while not exhaustive, does focus attention on the principal areas and facets of the mining complex towards which further enquiries will have to be directed:

(a) *Mining Communities:* Municipal assessments; mining revenue payments; the burden of debt; borrowing powers; increased costs of basic facilities and essential services; mining effluents; effective pollution control; diversification and the provision of alternative employment opportunities; industrial relocation and the subsidization of new industry; roads and highways in relation to tourism and area development; instability of employment through fluctuating mineral markets, ore

depletion, mine closures; problems of declining populations.

(b) *Mining Finance:* Raising risk capital; primary distribution of mining shares through stock exchanges; the unlisted market; rules and controls for public protection; stock promoters; options; unethical practices; maintaining public confidence; the functions of the Toronto Stock Exchange and of the Ontario Securities Commission; development companies.

(c) *Exploration:* Assistance to prospectors through financial aid and rental of equipment; prospectors' licences; transferability of licences and of claims; claim staking procedures and requirements; staking fees; the recording of claims; map staking; concessions and exploration licences; scientific exploration techniques; study groups for prospectors; geological and geophysical surveys; reconnaissance maps and reports; magnetometer and electromagnetic surveys; assays and analyses; assessment credits; mining leases; patented claims; the breaking of patents; mineral rights and surface rights; forfeiture and expiry of rights; dormant and undeveloped properties; fragmentation of acreages; concentrated control of tracts with mineral potential; land grant holdings; multiple land use in provincial parks.

(d) *The Work Force:* Industrial injuries; mine safety practices and accident prevention; noise and dust control; mine rescue training units; occupational diseases; medical examining centres; physical working conditions; workmen's compensation; mechanization and retraining of miners; technical and vocational training for the unemployed; adult education in mining communities; attracting potential entrants into the industry through school curricula, exhibitions, museums, libraries, education centres of science and technology, and through incentives, both financial and social; the supply of and demand for engineers, geologists technicians; the Provincial Institute of Mining; schools of mining in the universities.

(e) *The Mining Industry:* Methods of production—the utilization of advanced mining and extractive techniques; efficient tools and equipment for drilling, loading, shaft sinking; nuclear blasting techniques; atomic energy as a power source; natural gas as fuel; the use of piped mill tailings; transporting solids through pipe lines; modern approaches to ore treatment; novel methods of processing; improved construction materials; transportation facilities:

Product development—effective use of by-products; quality improvements to increase value and marketability; new uses;

Economic research—forecasting developments and assessing future professional and technical requirements; consumer research, market surveys, demand prospects; investment plans;

organizational aspects of basic research and development—centralized research and training centres sponsored and directed by the industry; financial aid for economic and scientific research in universities; support for management training programmes in schools of business; the dissemination of technical information; co-operation among the Ontario Mining Association, the Ontario Department of Mines and the Department of Mines and Technical Surveys, Ottawa;

Taxation—write-offs and the determination of taxable income; interest payments on debts; tax incentives for research; deductions for exploration and prospecting costs; other pre-production expenses; depreciation and depletion allowances; retail sales tax exemptions; the acreage tax; rental rates; stumpage dues; limits to the yield of the mining tax or royalty; tax relief or incentive programmes to encourage mining and the processing of ores.

6. This arrangement of the subject matter of the Committee's field of interest is useful in defining the scope of its work and in demarcating the topics which it proposes to study further. In some cases

its labours will be greatly facilitated by the findings of other government-appointed boards of enquiry; for example, the Ontario Committee on Taxation whose report, it is expected, will be published before the end of the year; the recent report of the Kimber Commission which reviewed Securities legislation and stock-exchange procedures will be of valuable assistance to the Committee in its study on regulations governing the financing of mining prospecting and development.

7. On the basis of the presentations received to date and the observations made during inspections conducted in the mining areas of northeastern and eastern Ontario, the Committee is satisfied that there are substantial grounds for making the following firm recommendations:

(a) *Mining Development in Provincial Parks:*

The issue has been raised, both before the Committee and in public discussion, of allowing supervised exploration in provincial parks.

The Committee recommends that extensive geological and geophysical surveys be undertaken *prior* to the scheduling of areas as parks; and that every effort be made, in the establishment of new parks, to locate them in tracts of low mineralization.

(b) *Mining Access Roads:*

The need for further extension of the existing policy, whereby the Department of Mines participates in the financing of mining access roads, is apparent to the Committee.

It is recommended, accordingly, that the Department broaden its survey of possibilities in this respect, that it re-examine its regulations governing its work in this field with the aim of instituting a more comprehensive programme, and that it allocate additional funds for an extended and accelerated policy of road construction and restoration.

(c) *The Provincial Institute of Mining:*

As a result of the shortage of mining engineers, and with the advent of so many technological advances made in the

mining industry in the past few years, there has been an increasing demand for qualified engineering technicians and technologists.

The Ontario Department of Education has developed a Provincial Institute of Mining located at Haileybury, that is world renowned. Until 1964 Ontario stood alone in the production of qualified technicians and technologists trained expressly for the mining industry.

In 1964 British Columbia established its own mining institute which has been patterned after the very successful Ontario Institute of Mining. The Provincial Institute of Mining prepares students for a variety of mining occupations such as: mine surveyors and draftsmen, mine foremen, mill and laboratory technicians, and geological assistants. This school's broad course makes possible the ready transfer of graduates from one mining occupation to another according to individual preference or as company needs require.

Also, the knowledge of exploration, mine development and operation, makes possible the promotion of technicians to senior positions.

During a tour of the mining communities the Committee heard frequent and glowing references to the excellent training received by Provincial Institute of Mining graduates. On the basis of a questionnaire survey conducted by this Committee, we know from information provided by the mining companies that the present facilities of the Provincial Institute of Mining fall short of ensuring the education of the increased number of mining technicians the industry will require in three short years' time.

It is recommended that immediate action be taken by the Department of Education to ensure that the present accommodation, facilities and teaching staff of the Provincial Institute of Mining be extended to meet the constantly increasing number of applicants so that the necessary facilities will be ready for use when the school year begins in September 1966.

The Committee's very broad terms of reference have provided ample opportunity to probe and investigate a vast number of subjects. Research is presently underway into the very complex aspects affecting the economics of the mining industry. The Committee's Secretary has held talks with representatives of the Department of Natural Resources in Quebec and these have proven fruitful. Various attitudes of those most closely associated with mining have been probed with regard to a number of subjects affecting the industry. Much of this information and material has yet to be completely analyzed and evaluated.

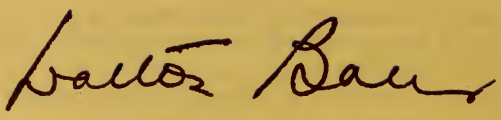
The members of the Committee have not yet visited the mining areas located in the vast territory of northwestern Ontario. Tentative plans have been drawn up to hold public meetings in this area, as already we have received communications from mining companies and municipalities indicating their desire to present briefs to this Committee. Inspection tours of this nature provide the members with a greater appreciation of the vastness of our Province, as well as the opportunity to gain first-hand knowledge of the needs of the people living in remote and sparsely populated areas.

The expanding gas and oil industry of southwestern Ontario, as well as the long established salt mining industry of the area, should also be inspected during the months that lie ahead.

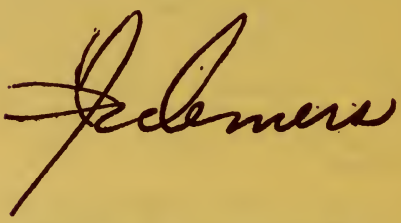
It can be seen that a great deal of unfinished business must be completed by this Committee before it can attain its primary objective of finding ways and means of improving the mining industry. To accomplish this goal, it is humbly requested that the Committee be reappointed so that it may continue its work and make a lasting contribution to Ontario's expanding mining industry.

The above is faithfully submitted by the members of the Select Committee on Mining.

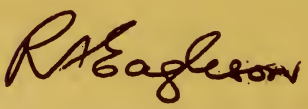
MR. RENE BRUNELLE, M.P.P., *Chairman*



Mr. Dalton Bales, M.P.P.

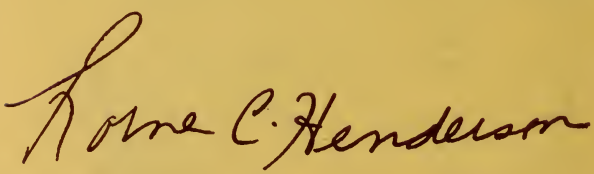


Mr. J. C. G. Demers, M.P.P.



Mr. R. Alan Eagleson, M.P.P.

Mr. E. G. Freeman, M.P.P.



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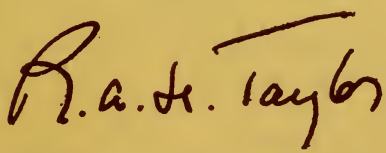

Mr. R. A. H. Taylor, M.P.P.

Appendix "A"

A list of the locations and dates of public meetings held to hear formal and informal submissions.

List of Public Meetings

Held to Date

1964

June 15	Queen's Park
June 16	Queen's Park
July 20—July 24 (inclusive)	Tour of Northeastern Ontario —Timmins, Porcupine, Kirkland Lake, Haileybury, Cobalt and Sudbury area. Informal briefs were presented during this tour.
October 14	Queen's Park
October 15	Bancroft—Hastings County
October 16	Madoc and Marmora —Hastings County
November 4	Queen's Park
November 5	Queen's Park
December 7	Wawa
December 8	Sault Ste. Marie
December 9	Elliot Lake
December 10	Sudbury
December 11	Timmins

1965

January 12	Queen's Park
January 13	Queen's Park

Appendix "B"

A list of the names of the associations, municipalities, organizations, and individuals submitting written briefs to the Select Committee on Mining.

List of Formal Briefs

Received to Date

Ontario Mining Association
Corporation of the Township of Teck
The Association of Mining Municipalities of Northern Ontario
The Consumers' Gas Company
Township of Carlow
Mr. M. J. McGale, Prospector—New Liskeard

Improvement District of Beardmore
Mr. Donald E. Sirola—Kirkland Lake
Mr. H. G. Greene—Peterborough
International Union of Mine, Mill and Smelter Workers
Mr. Roderick MacDonald—Timmins
The Corporation of the Town of Cobalt
Village of Bancroft
United Steelworkers of America
Labow Mining Consultants Limited
Town of Timmins
Temiskaming Mine Operators Association
Dr. George A. Collins, P. Eng.—Toronto
Mr. J. Bardswich, P.Eng.—Sudbury
Timmins-Porcupine Chamber of Commerce
Caland Ore Company Limited
Cobalt Refinery Company
Broker-Dealers' Association of Ontario
Department of Mineralogy—Royal Ontario Museum
Department of Geology—Royal Ontario Museum
Ontario Petroleum Institute Inc.—Letter of Intention
Canada Talc Industries Limited
Village of Marmora
Mr. James D. Cumming, P.Eng.—Madoc
Mr. G. W. Walkey, B.A.Sc., P.Eng.—Timmins
Mr. Earle Kelley—Porcupine Prospectors' Association
Elk Lake Chamber of Commerce
United Steelworkers of America
Hydro-Electric Power Commission of Ontario
Mr. T. W. Kierans, P. Eng.—Sudbury
Professor Winters and Chung—Laurentian University, Sudbury
Sudbury Game & Fish Association
Northeastern Ontario Chambers of Commerce
Sudbury & District Chambers of Commerce
Mr. R. R. Ranson—Sault Ste. Marie
Mr. W. D. Sutherland, Consulting Geologist—Sault Ste. Marie
Mr. T. N. MacAulay, M.Sc., P.Eng.—Sault Ste. Marie
Trans Canada Pipelines
Vauze Mines Limited
Town of Wawa—Township of Michipicoten

Wawa Chamber of Commerce
Wawa Circle Tourist Association
James Sanders, D.C.—Wawa
Carl Nyman, Prospector—Wawa
R. Daniels—Wawa
Mr. R. L. Cavanaugh—Ontario Research Foundation
Northern Ontario Natural Gas
City of Sudbury
Watts, Giffis & McOuat, Consulting Geologists and Engineers—Toronto
Frontier College
R. D. Hindson, Canadian Institute of Mining
Professor A. V. Corlett, P.Eng.—Kingston
N. R. Schindler, P.Eng.—Montreal
A. James Walker—Port Credit
Ontario Petroleum Institute Inc.
Gas Petroleum and Association of Ontario
Mr. Gordon Willsie—Thedford
Mr. O. E. Walli, Principal, Provincial Institute of Mining—Haileybury
Mr. Roy Barker, Prospector—Geraldton
Mr. Sherwin F. Kelly, Geophysicist & Geologist—Merritt, B.C.
Mr. T. W. Kierans, P.Eng.—Sudbury

MINERAL PRODUCTION 1963 AND 1964

METALLIC MINERALS

	ONTARIO				CANADA			
	1963		1964		1963		1964	
	Quantity	Value	Quantity	Value	Quantity	Value	Quantity	Value
Antimony	———	$ ———	———	$ ———	1,601,253 lbs.	$ 624,489	1,718,634 lbs.	$ 866,200
Bismuth	65 lbs.	146	———	———	359,125 lbs.	704,103	387,213 lbs.	839,725
Cadmium	———	———	———	———	2,475,485 lbs.	5,941,164	2,800,761 lbs.	8,950,213
Calcium	98,673 lbs.	117,247	158,875 lbs.	174,762	98,673 lbs.	117,247	158,875 lbs.	174,762
Cobalt	2,156,732 lbs.	4,409,262	2,219,345 lbs.	4,793,785	3,024,965 lbs.	6,122,169	3,196,322 lbs.	6,484,255
Columbium (Cb_2O_5)	———	———	———	———	1,393,444 lbs.	1,300,009	2,250,000 lbs.	2,305,000
Copper	357,919,536 lbs.	112,048,454	402,062,125 lbs.	132,519,010	905,117,779 lbs.	284,403,710	988,033,963 lbs.	328,233,604
Gold	2,338,854 ozs.	88,291,739	2,135,269 ozs.	80,606,407	3,986,044 ozs.	150,473,161	3,810,738 ozs.	143,855,362
Iron Ore	6,749,617 tons	70,033,690	7,985,715 tons	84,423,975	30,143,649 tons	312,140,541	38,664,583 tons	402,892,490
Iron Remelt	———	———	———	———	. . . .	11,806,597	. . . .	15,954,893
Lead	3,077,814 lbs.	338,560	3,976,464 lbs.	534,437	402,329,071 lbs.	44,256,199	400,770,432 lbs.	53,863,546
Magnesium	17,810,348 lbs.	5,357,816	18,041,900 lbs.	5,592,989	17,810,348 lbs.	5,357,816	18,041,900 lbs.	5,592,989
Mercury	———	———	———	———	———	———	5,548 lbs.	22,192
Molybdenum	———	———	31,070 lbs.	42,566	833,867 lbs.	1,344,004	1,278,404 lbs.	1,789,234
Nickel	298,178,570 lbs.	246,252,488	330,508,485 lbs.	268,506,035	434,059,725 lbs.	360,392,658	465,749,775 lbs.	381,996,719
Platinum Group	359,649 ozs.	22,585,055	374,988 ozs.	25,196,159	357,651 ozs.	22,585,205	374,988 ozs.	25,196,159
Selenium	95,100 lbs.	461,235	103,405 lbs.	502,548	468,772 lbs.	2,273,545	448,750 lbs.	2,213,182
Silver	9,601,621 ozs.	13,288,643	10,719,539 ozs.	15,007,355	29,927,723 ozs.	41,412,968	31,111,943 ozs.	43,556,719
Tellurium	7,705 lbs.	50,082	7,900 lbs.	47,400	76,842 lbs.	499,473	79,789 lbs.	508,830
Tin	———	———	———	———	927,062 lbs.	648,943	356,074 lbs.	623,128
Uranium (U_3O_8)	12,770,421 lbs.	102,951,146	12,035,382 lbs.	74,361,393	16,703,066 lbs.	136,909,119	13,828,369 lbs.	85,418,271
Zinc	132,939,970 lbs.	16,989,728	136,839,166 lbs.	19,390,110	947,444,960 lbs.	121,083,466	1,364,048,909 lbs.	193,285,404
Total Metals		$683,175,291		$711,698,931		$1,510,403,586		$1,704,622,877

NON-METALLIC MINERALS

	ONTARIO				CANADA			
	1963		1964		1963		1964	
	Quantity	Value	Quantity	Value	Quantity	Value	Quantity	Value
Arsenious Oxide	187,450 lbs.	$ 7,498	300,000 lbs.	$ 12,000	187,450 lbs.	$ 7,498	300,000 lbs.	$ 12,000
Asbestos	33.715 tons	5,372,645	15,500 tons	2,256,000	1,275,530 tons	136,956,180	1,377,079 tons	148,370,312
Barite	———	———	———	———	173,503 tons	1,693,119	172,415 tons	1,692,400
Diatomite	———	———	———	———	798 tons	26,830	584 tons	20,360
Feldspar	———	———	———	———	8,608 tons	197,031	8,615 tons	205,420
Fluorspar	———	———	———	———	. . . .	1,976,006	. . . .	2,291,626
Gemstones	———	———	———	———	16,000 lbs.	15,529	. . . .	15,000
Graphite	———	———	———	———	———	———	13 tons	6,570
Grindstone	———	———	———	———	10 tons	2,000	10 tons	2,000
Gypsum	439,206 tons	1,225,301	490,000 tons	1,355,000	5,955,266 tons	11,237,952	6,373,765 tons	12,397,828
Iron Oxides	———	———	———	———	978 tons	74,505	914 tons	79,015
Lithia	———	———	———	———	644,354 lbs.	682,029	1,049,783 lbs.	1,152,000
Magnesitic Dolomite, Brucite	———	———	———	———	. . . .	3,439,890	. . . .	3,467,029
Mica	342,185 lbs.	5,114	119,000 lbs.	3,646	1,183,041 lbs.	44,284	1,202,800 lbs.	95,583
Nepheline Syenite	254,000 tons	2,699,202	292,042 tons	3,397,106	254,000 tons	2,699,202	292,042 tons	3,397,106
Peat Moss	30,659 tons	610,784	28,424 tons	813,600	243,346 tons	7,985,921	245,117 tons	7,177,608
Potash (K_2O)	———	———	———	———	626,860 tons	22,500,000	862,440 tons	30,660,000
Pozzolana	———	———	———	———	. . . .	17,994	. . . .	20,000
Pyrite, pyrrhotite	———	———	———	———	476,438 tons	1,643,629	356,349 tons	1,128,019
Quartz	952,166 tons	644,287	1,043,768 tons	592,485	1,888,596 tons	3,859,980	2,130,837 tons	4,602,864
Salt	3,187,491 tons	14,793,161	3,265,909 tons	14,481,663	3,721,994 tons	22,316,565	3,892,636 tons	23,075,518
Soapstone, Talc	6,903 tons	107,986	7,900 tons	133,000	54,250 tons	757,878	57,150 tons	819,154
Sodium-Sulphate	———	———	———	———	256,914 tons	4,121,114	330,178 tons	5,328,220
Sulphur in Smelter Gas	. . . .	1,406,694	. . . .	1,677,329	353,243 tons	3,488,181	434,776 tons	4,493,182
Sulphur, Elemental	. . . .	53,744	. . . .	13,426	1,249,887 tons	13,380,182	1,611,181 tons	15,409,943
Titanium Dioxide, etc.	———	———	———	———	. . . .	14,426,444	. . . .	20,981,935
Total Non-Metallics		$26,926,416		$24,735,255		$253,549,943		$286,900,692